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UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

Project	Date	Author

TITLE

FOREST INSECT SURVEY - SAN BERNARDINO NATIONAL FOREST

Season of 1940

by
J. M. Miller
Berkeley, California
December 18, 1940

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SUBJECT—

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Forest Insect Laboratory
Berkeley, California
December 18, 1940

FOREST INSECT SURVEY - SAN BERNARDINO NATIONAL FOREST

Season of 1940

SUBMITTED BY:

J. M. Miller

J. M. MILLER

Senior Entomologist, In Charge

FOREST INSECT SURVEY - SAN BERNARDINO NATIONAL FOREST

Season of 1940

The 1940 insect control survey for this forest was made during the period November 4 to 8, by S. T. Carlson and J. M. Miller of the Forest Insect Laboratory. As a part of this examination, C. E. Dunston of the Regional Office, Forest Supervisor Nelson, Claude Barker and George Lang looked over conditions in the control areas of the Crestline and Arrowhead units on November 7. Mr. Dunston also inspected the San Jacinto, Idyllwild and Kenworthy units on November 8.

Estimates of the 1940 infestation were arrived at by counting insect killed trees that could be seen from road traverse and topographic viewing points. Accessible infested trees were examined closely to determine the primary insects involved in the infestation.

CHARACTER OF THE 1940 INFESTATION

Barkbeetles continue to be the chief cause of tree killing in the pine types, but with losses greatly reduced from those of the preceding year.

Aggressive topkilling of mature trees and group killing of poles caused by the engraver beetle, Ips Oregoni, in Coulter and ponderosa pine was prevalent in 1930, but has largely subsided during the 1940 season. 1939? (?)

The western pine beetle, Dendroctonus brevicomis, which was epidemic in the Crestline-Lake Arrowhead units in 1939 was brought under control and its activity is now lower in these areas than it has been for a number of years. In other units where endemic conditions existed last year, there has been little change except that in most areas losses are somewhat lower than in 1939.

Endemic conditions prevail generally for the mountain pine beetle, Dendroctonus monticolae, in sugar pine and for the Jeffrey pine beetle.

In contrast to other barkbeetle species, the five spined engraver beetle, Ips confusus, became epidemic this season in the pinon pine type over a considerable area in the Big Bear district. Numerous groups of dying trees developed on the pinon covered slopes of the Arrastre, Doble and Holcomb units in the Big Bear area.

The California pine scale is causing the defoliation and stunting of ponderosa pines near Lake Gregory in the Crestline unit. The trouble is centered in about 700 acres used for summer home sites. This scale infestation was noticeable in 1930 and during the current year has shown little sign of subsiding from natural causes.

1939?

CONDITIONS BY INFESTATION AREAS

Arrowhead Infestation Area

Because of the cooperative arrangements developed between the Forest Service and the San Bernardino County, Zone 5, Flood Control District to further the barkbeetle control work conducted in January and February, 1940, a special report was prepared in April and distributed to both agencies. In view of the need for continuing cooperative arrangements, a survey report with recommendations for further work in the Arrowhead Infestation Area was prepared and distributed as soon as possible after the field work of this survey was completed. A copy of this recent report is now on file with the Regional Forester and the Forest Supervisor. For more detailed information on the survey of this area, reference is made to this report dated December 2, 1940.

Briefly, the improvement in the condition of the infestation in this area resulting, from the control work of the past season, has been such that only a small amount of maintenance control work is necessary during the coming winter period. This has been recommended for the Crestline, Arrowhead and Snow Valley units.

Big Bear Infestation Area

Ips epidemic in pinon: The most striking development in this area during the 1940 season has been the flare up of Ips killing in the pinon type. On the desert slopes, group killing of pinon is general. The groups as yet are small, the largest not exceeding 25 trees. The heaviest losses were found in the Arrastre and Doble units. A similar outbreak developed in these same areas during the period from 1931 to 1934. In this earlier outbreak the infestation spread out around the first groups that formed so that fairly large patches of pinon were killed before the epidemic subsided from natural causes. Any attempt to control this infestation does not seem warranted since the values threatened are limited to watershed cover and intensively used areas are not threatened.

Conditions in the pine type: In general the barkbeetle infestation is very light throughout the area. Most of the endemic loss is in Jeffrey pine. In the Holcomb unit there is some concentration of infested trees along the stream bed of Holcomb Creek. These are mostly trees which

were injured in the flood damage of three years ago and the infestation is not of the aggressive type. As long as the present conditions continue, an intensive control campaign on the Federal lands is not needed in any of the units of this area. However, treatment of accessible infested trees in the areas of intensive use should be encouraged where this work can be done by the owners.

Santa Ana-Mill Creek Infestation Area

Control work was not recommended in the Santa Ana canyon unit in 1939 because of the low endemic status of the infestation. The 1940 loss is even less than in 1939. The Mill creek unit also shows some decline this year and control is not recommended.

San Jacinto Infestation Area

There is a center of aggressive barkbeetle activity in this area in the Baldy unit. It is most noticeable around Mountain Center and extends into the southern boundary of Idyllwild unit. The western pine beetle in Coulter pine and the pine flathead in Jeffrey pine are largely the species concerned. The infestation increased from 60 trees in 1939 to 80 trees in 1940. The flathead type of infestation in younger Jeffrey pines is similar to that in the Lagunas and is the most conspicuous feature of this infestation center.

The western pine beetle in the Idyllwild unit is very light except along the southern border adjoining the infestation center in the Baldy unit.

The San Jacinto unit shows a decline from an estimated loss of 100 trees in 1939 to 65 trees in 1940. The Kenworthy unit shows a decline from 50 trees last year to 25 trees in 1940.

Control work is recommended for the infestation center in the Baldy unit. If work is undertaken the infestation will be found mainly on private lands and the National Forest will be involved only to a very limited extent. In previous control jobs it was found that the owners of the largest private acreage in this area, used chiefly for grazing, were unfavorable to pine beetle control work. Unless this attitude has changed, it is doubtful whether the cooperation necessary to a successful project can be developed.

In areas of intensive use, losses as high as those in the San Jacinto unit would warrant maintenance control if the infested trees were accessible and the work could be handled within a reasonable cost. However, in this area the infestation is scattered over steep topography. Difficulties and costs of getting to infested trees during the winter control period would make control an expensive undertaking. Since there was some decline of losses during the past season, it seems best to drop consideration of control work in this district for the coming winter.

RECOMMENDATIONS

The considerations which must govern forest insect control policy in the San Bernardino areas are largely dependent on the land and timber values established by intensive recreational use. In thickly settled summer home tracts even light or endemic infestations warrant attention and infested trees had best be treated as they appear. Where only the watershed cover is concerned, endemic infestations can be disregarded, except when infested trees can be considered a threat to the timber on nearby intensively used tracts. These are factors to be considered in appraising the need for and desirability of control in the various units.

For the current season control work by the peel and burn method on pines containing the overwintering broods is recommended for the following units:

Infestation Unit	Area	Estimated Number of Trees To Be Treated
Crestline	3,000	30
Arrowhead	8,000	20
Snow Valley	2,000	20
Baldy	2,500	50

In the Baldy unit the present private land owners have not indicated that they consider the values that are being lost sufficiently important to warrant action. Work here is recommended mainly because of the fact that the infestation shows increasing tendencies and may spread into more valuable tracts.

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FOREST INSECT LABORATORY - BERKELEY, CALIFORNIA

FOREST INSECT SURVEY

BIG BEAR INFESTATION AREA

SAN BERNARDINO COUNTY, CALIFORNIA

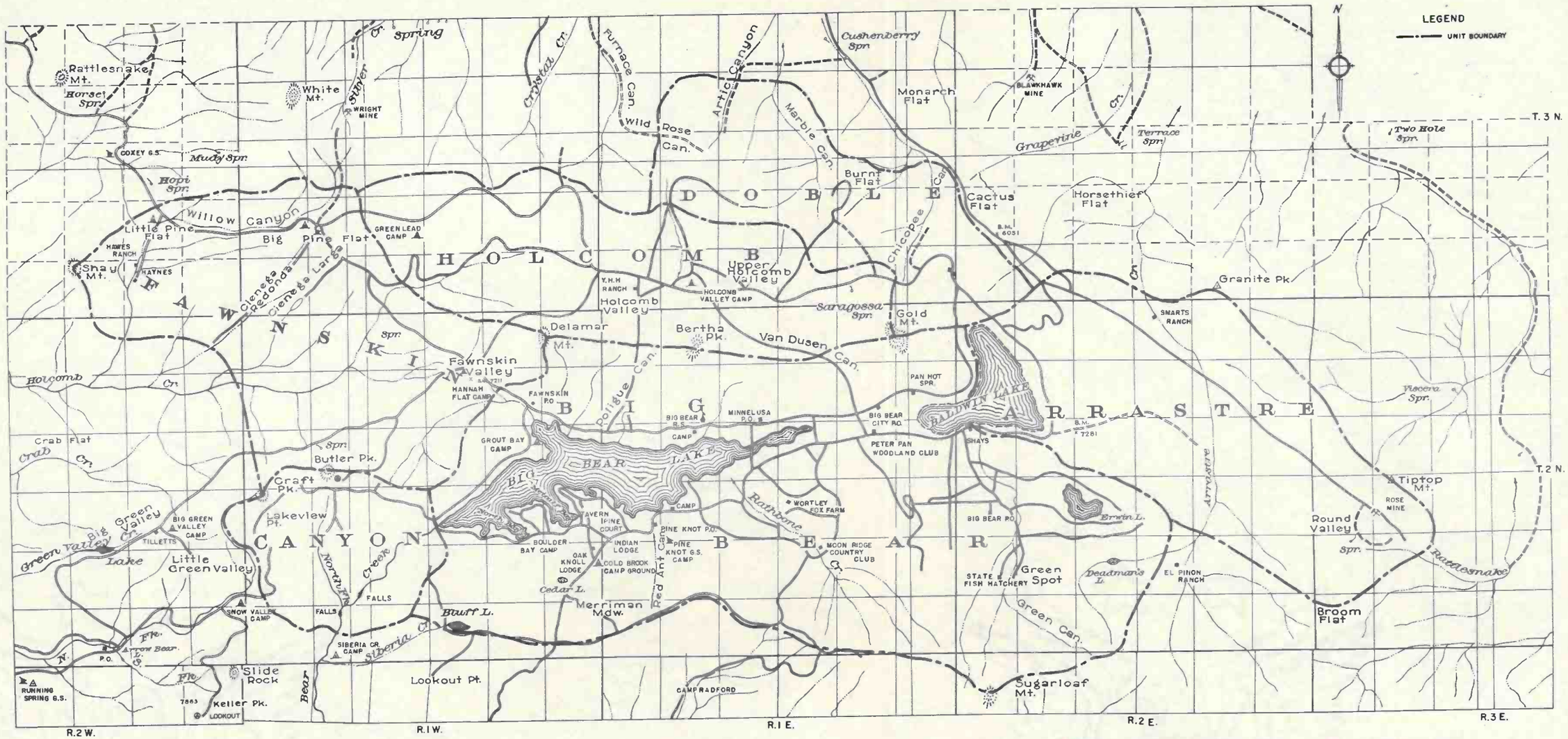
SAN BERNARDINO MERIDIAN

SCALE

In 0 ½ 1 2 3 Miles

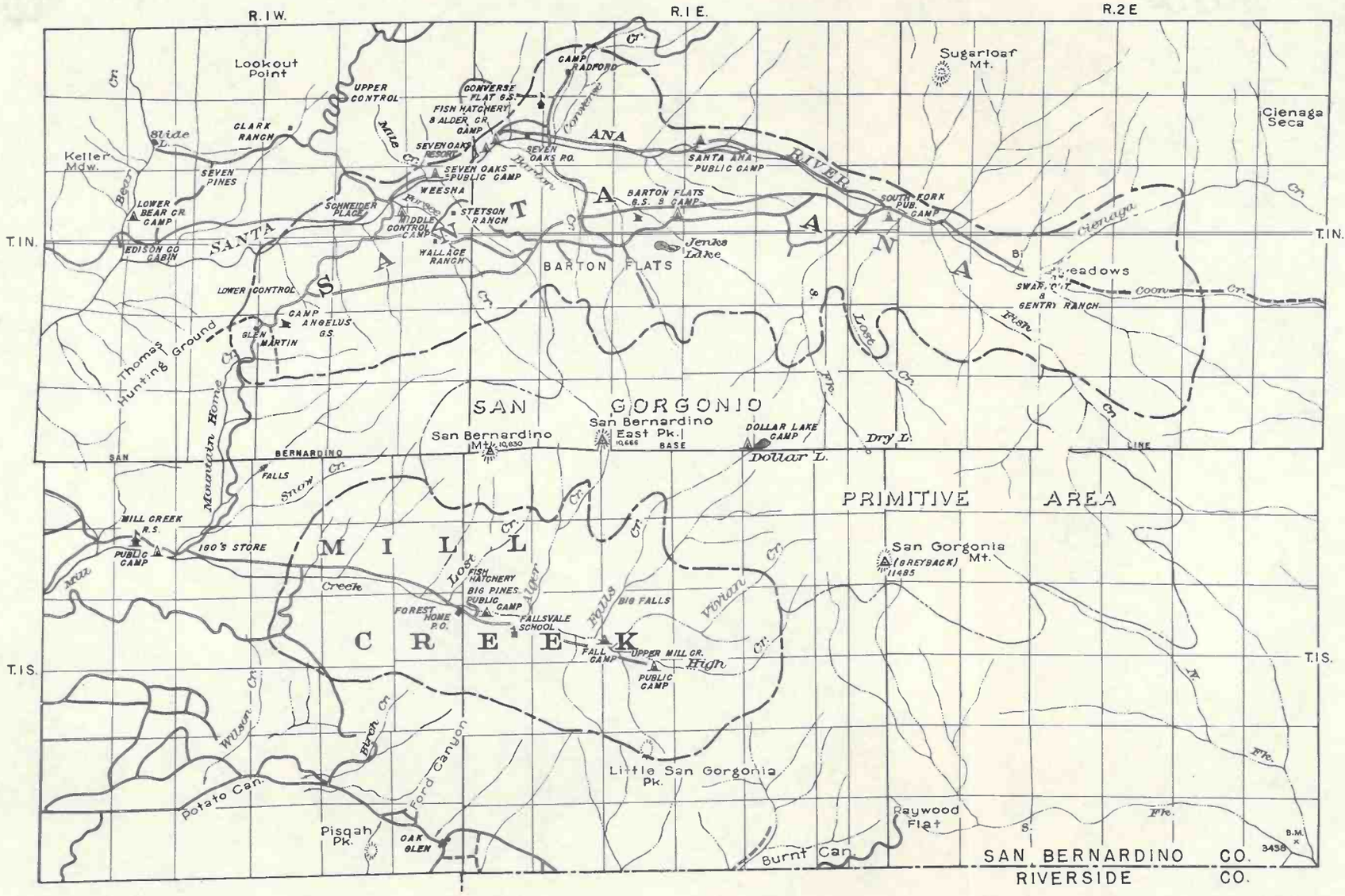
ESTIMATED UNIT LOSS - 1940

UNIT	NO. OF TREES		TOTAL
	PINE	PINYON	
DOBLE		800	800
HOLCOMB	50	300	350
FAWNSKIN	50		50
BIG BEAR	25	300	325
ARRASTRE		1000	1000
CANYON*	20		20



*150 DYING WHITE FIR ALSO ESTIMATED.
MAINLY IN CANYON BOTTOM.

8/11/39 R.R.



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FOREST INSECT LABORATORY - BERKELEY, CALIFORNIA

FOREST INSECT SURVEY

SANTA ANA-MILL CREEK INFESTATION UNIT

SAN BERNARDINO COUNTY, CALIFORNIA

SCALE

In 0 ½ 1 2 3 Miles

SAN BERNARDINO MERIDIAN

N

LEGEND

UNIT BOUNDARY

ESTIMATED UNIT LOSS - 1940

UNIT	NO. OF TREES (PINES)
SANTA ANA	50
MILL CREEK	40

8/5/39 R.R.

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FOREST INSECT SURVEY

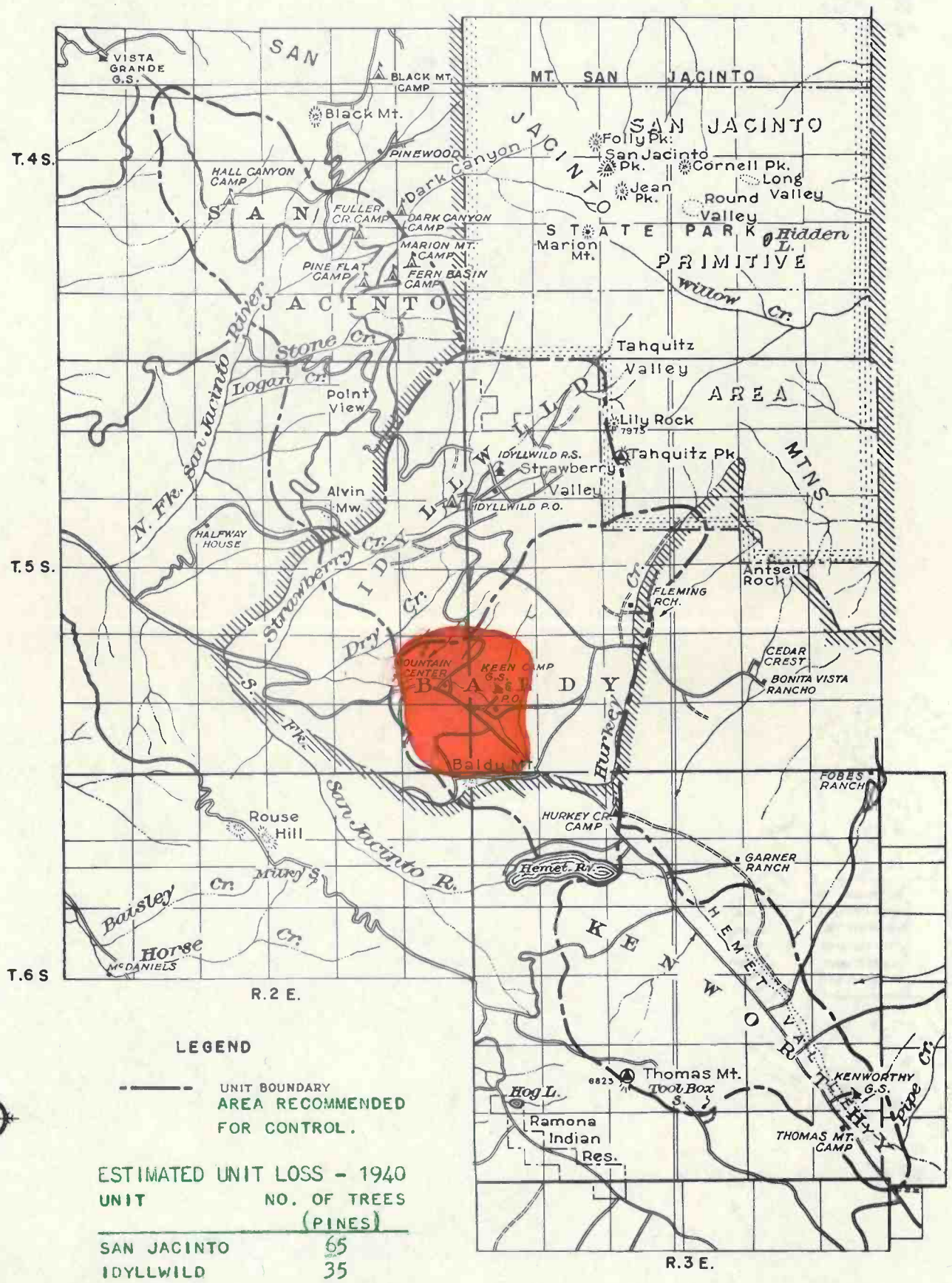
SAN JACINTO INFESTATION AREA

RIVERSIDE COUNTY, CALIFORNIA

SAN BERNARDINO MERIDIAN

SCALE

In 0 ½ 1 2 3 4 Miles



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LEGEND

UNIT BOUNDARY

AREA RECOMMENDED FOR CONTROL.

ESTIMATED UNIT LOSS - 1940

UNIT	NO. OF TREES (PINES)
SAN JACINTO	65
IDYLLWILD	35
BALDY	80
KENWORTHY	25

8/22/39 R.R.